COURT OF APPEAL OF LOUISIANA
FOURTH CIRCUIT

In re NEW ORLEANS TRAIN CAR LEAKAGE FIRE LITIGATION

No. 2000-CA-0479

June 27, 2001

This is a class action. It arises out of a chemical leak and fire involving a railroad tank car. After a two-phase trial, the jury found all defendants liable for compensatory damages and several defendants liable for punitive damages. The quantum of compensatory damages was determined as to each of twenty selected plaintiffs. The quantum of punitive damages was determined as to each of the several defendants found liable for punitive damages. All but three of the defendants settled. The three non-settling defendants bring the present appeal.

Defendant-appellant CSX Transportation, Inc. ("CSX") was held liable for 15% of the compensatory damages and was held liable for punitive damages. Defendant-appellant AMF-BRD, Inc. ("AMF-BRD") was held liable for 5% of the compensatory damages but was not held liable for punitive damages. Defendant-appellant Nova Chemicals, Inc. ("Polysar") was held liable for 5% of the compensatory damages but was not held liable for punitive damages. AMF-BRD and Polysar appeal as to liability for compensatory damages. AMF-BRD, Polysar and CSX all appeal as to the quantum of compensatory damages. CSX appeals as to liability for, and quantum of, punitive damages. The plaintiffs have answered these appeals and seek additional damages and prejudgment interest on punitive damages. For the reasons given below, we affirm the judgment of the trial court. Additionally, we remand this

case to the trial court for proceedings as to the quantum of compensatory damages with respect to the remaining class members and for any other proceedings as are necessary to conclude this action.

On September 9, 1987, a pressurized railroad tank car which was loaded with butadiene ("GATX 55996") was parked on the interchange tracks of CSX in a residential area, Gentilly, of New Orleans. At about 1:50 a.m., GATX 55996 leaked and ignited. Butadiene is a carcinogenic hazardous chemical. It is flammable and also volatile, so that it can explode. The chemicals produced by burning butadiene include several carcinogenic hazardous chemicals. The butadiene leaked from GATX 55996 as a heavier-than-air gas so, as it leaked from GATX 55996, it spread out along the ground to the surrounding residential areas. Eventually, the butadiene reached an ignition source, possibly the hot water heater of a home, ignited, and flashed back to GATX 55996, which itself ignited. Five other pressurized tank cars loaded with butadiene were coupled to the now-flaming GATX 55996.

GATX 55996 burned for two days and, throughout that time, butadiene and the products of burning butadiene were carried by the wind, and deposited as soot, throughout the surrounding residential area. There was a danger that GATX 55996 might either explode, possibly destroying a number of city blocks, or even take off like a missile and travel as far as a mile through the surrounding residential area. There also was a danger that the fire might spread from GATX 55996 to the other five pressurized tank cars of butadiene to which GATX 55996 was coupled. Such a spread of the fire would result in further hazardous chemical release and further danger of explosions.

The neighborhood around the fire was evacuated. As it turned out, GATX 55996 did not explode (although some of

the released butadiene did explode) and, after two days, the fire burned itself out. Also, the other five pressurized tank cars loaded with butadiene were successfully uncoupled and moved away from GATX 55996, so the fire never did spread to those five tank cars. After the fire burned itself out, the people of the surrounding areas were allowed to return home.

Class action suits were filed against nine defendants which, after some corporate name changes, are now known as: The Alabama Great Southern Railroad Company ("AGS"), AMF-BRD, Inc. ("AMF-BRD"), CSX Transportation Inc. ("CSX"), GATX Terminals Corporation ("GATX"), General American Transportation Corporation ("GATC"), Illinois Central Railroad Company ("Illinois Central"), Mitsui & Company (U.S.A.), Inc. ("Mitsui"), Nova Chemicals, Inc. ("Polysar"), and Phillips Petroleum Company ("Phillips"). The plaintiffs sought not only compensatory damages, but also punitive damages under Article 2315.3 of the Civil Code, because the butadiene leak and fire involved a hazardous or toxic substance. The roles of the nine defendants are, briefly and generally described, as follows: AMF-BRD manufactured the pressurized tank which was installed in GATX 55996. The installation of the tank, and the overall assembly of GATX 55996, was done by non-party North American Car Corporation ("NACC"), which is now out of business. The pressurized tank on GATX 55996 which was manufactured by AMF-BRD had a "manway" (an opening through which the car is cleaned) on the bottom. The bottom manway was sealed using an asbestos gasket. NACC sold GATX 55996 to Phillips. During the course of apparently routine maintenance, Phillips replaced the asbestos gasket with a rubber gasket. Butadiene can react with a rubber gasket causing a leak. Also, Phillips misaligned the rubber gasket and this, too, could cause a

leak. Phillips then sold GATX 55996 to GATC. GATC labeled GATX 55996 as a butadiene tank car and owned GATX 55996 at the time of the butadiene leak and fire at issue. At the time of the butadiene leak, GATX 55996 was leased by GATC to Mitsui. On September 4, 1987, five days before the butadiene leak and fire, GATX, which is an affiliate of GATC, loaded GATX 55996 with butadiene at GATX's Good Hope, Louisiana terminal. The butadiene was owned by Polysar and was being shipped to a Polysar plant in Chattanooga, Tennessee. Polysar bought the butadiene overseas and arranged for it to be brought by ship to Louisiana and then off loaded to rail tank cars at GATX's Good Hope terminal. Polysar did not send anyone to Good Hope to inspect the rail tank cars or observe their loading. On September 5, 1987, Illinois Central, at GATX's Good Hope terminal, put GATX 55996 into a train with other butadiene tank cars and transported it to an Illinois Central train yard. Illinois Central then moved GATX 55996 to interchange tracks where Illinois Central and AGS exchange railroad cars. (An "interchange" is an area of track where one railroad leaves rail cars for another railroad.) AGS then moved GATX 55996 to CSX's interchange tracks in Gentilly. AGS delivered GATX 55996 and some other rail cars to CSX, and notified CSX's employees to pick up GATX 55996 and the other rail cars, at about 7:25 p.m. on September 8, 1987. GATX 55996 remained on CSX's interchange tracks for over six-and-a-half hours until the fire broke out.

Another panel of this court affirmed the trial court's certification of a class. *See Adams v. CSX Railroads,* 615 So.2d 476 (La.App. 4th Cir.1993). Later, on defense writ applications, another panel of this court reversed the trial court's denials of motions for summary judgment with respect to punitive damages, and granted summary judgment with respect to punitive damages, as to defendants

AMF-BRD, Phillips and GATC, but affirmed the trial court's denials of motions for summary judgment by other defendants with respect to punitive damages. *In re New Orleans Train Car Leakage Fire Litigation*, 95- 2710, 95-2721, 96-0016, 95-2734, 95-2811, 96-0017, 95-2797, 96-0015 (La. App 4 Cir. 3/20/96), 671 So.2d 540, writ denied, 96-0972, 96-0984, 96-1287, 96-0977, 96-1311, 96-0978 (La.6/28/96), 675 So.2d 1120-22, cert denied, 519 U.S. 1009, 117 S.Ct. 512, 136 L.Ed.2d 402 (1996). Just prior to trial, the Louisiana Supreme Court, on defense writ applications, ruled that the jury should not be instructed to determine the amount of punitive damages (if any) by applying a multiplier to the amount of compensatory damages. *In re New Orleans Train Car Leakage Fire Litigation*, 97-1150, 97-1161 (La.6/27/97), 697 So.2d 239.

In the first phase of the trial, the jury determined liability for compensatory damages, quantum of compensatory damages as to twenty plaintiffs (ten selected by plaintiffs' counsel and ten selected by defense counsel) and liability for punitive damages (but not quantum of punitive damages). The jury found all nine defendants liable for compensatory damages and fixed varying amounts of compensatory damages for each of the twenty selected plaintiffs. Defendant-appellant CSX was assessed 15% of the liability for compensatory damages while defendant-appellants AMF-BRD and Polysar were each assessed 5% of the liability for compensatory damages. The jury found five of the defendants liable for punitive damages—CSX, AGS, GATX, Illinois Central and Mitsui. In the second phase of the trial, the jury determined the amounts of punitive damages—$2.5 billion as to CSX, and a total of $865 million in varying amounts against GATC, AGS, Mitsui and Illinois Central.

On September 25, 1997, the trial court rendered a judgment in accordance with the jury's verdicts which judgment assessed liability for compensatory damages, assessed liability for punitive damages, awarded compensatory damages to the twenty selected plaintiffs and awarded punitive damages "payable to class members who now or hereafter are awarded compensatory damages...." Subsequently, upon a CSX writ application, the Louisiana Supreme Court ruled that "the trial court erred in rendering a judgment awarding damages prior to rendering a judgment adjudicating all liability issues". *In re New Orleans Train Car Leakage Litigation*, 97-2547 (La.10/13/97), 702 So.2d 677. The trial court then, on June 17, 1998, rendered a judgment that awarded neither compensatory damages nor punitive damages. Subsequently, upon defense writ applications and a plaintiff's motion for clarification, the Louisiana Supreme Court held that the trial court should "enter judgment in favor of the twenty phase I plaintiffs on the issue of liability, allocation of fault and damages, both compensatory and exemplary" and designate that judgment as final "for purposes of post-trial motions and appellate review". *In re New Orleans Train Car Leakage Litigation*, 98-2399, 98-2622 (La. 2/24/99), 728 So.2d 853.

On April 8, 1999, the trial court rendered a judgment as directed by the Supreme Court. All of the defendants filed post-judgment motions. Those post-trial motions raised issues as to liability for compensatory damages, quantum of compensatory damages, liability for punitive damages and quantum of punitive damages. Prior to the trial court's ruling upon those defense post- judgment motions, six of the defendants, AGS, GATX, GATC, Illinois Central, Mitsui and Phillips, settled. Thus, as of the time of the trial court's decision of the post-judgment motions, the three remaining

defendants were CSX, AMF-BRD and Polysar and, of those three, only CSX was subject to a judgment for punitive damages. On November 5, 1999, the trial court rendered reasons for judgment on the post-judgment motions and: (1) upheld the determination of liability for compensatory damages: (2) set aside the awards of compensatory damages as to every one of the twenty selected plaintiffs and awarded lower compensatory damages to each of the twenty selected plaintiffs; (3) upheld the determination of CSX's liability for punitive damages and (4) reduced the quantum of punitive damages imposed upon CSX from $2.5 billion to $850 million. The trial court also held that interest would run on compensatory damages from the date of judicial demand and interest would run upon punitive damages from the date of signing of judgment. On November 17, 1999, the trial court rendered a judgment in accordance with its November 5, 1999 reasons for judgment. With respect to punitive damages, the trial court allocated small fractions of the $850 million awarded to the twenty selected plaintiffs (using a formula proposed by CSX and the plaintiffs and agreed to by the trial court) which totaled about $2.1 million and, as to the remainder of the punitive damages award, held that it should be paid into escrow and allocated to the remaining 8,000 + class members in accordance with further proceedings. The trial court certified its judgment for immediate appeal.

CSX, AMF-BRD and Polysar appeal the trial court's November 17, 1999 judgment and the plaintiffs have answered that appeal.

CSX's Appeal As To Punitive Damages

CSX argues on appeal that the punitive damages judgment against it should be reversed, vacated or reduced to no more than $1 million. CSX advances four arguments.

First, CSX argues that its conduct was not sufficiently egregious to warrant the imposition of punitive damages. Article 2315.3 of the Civil Code, at the time of the chemical leak and fire, provided that:

> In addition to general and special damages, exemplary damages may be awarded, if it is proved that plaintiff's injuries were caused by the defendant's *wanton or reckless disregard for public safety* in the storage, handling, or transportation of hazardous or toxic substances. (emphasis added).

The leading case on liability under Article 2315.3 is *Billiot v. BP Oil Co.*, 93-1118 (La.9/29/94), 645 So.2d 604. In *Billiot*, the Supreme Court stated the purposes of Article 2315.3 thus:

> Accordingly, we conclude that the purpose of Article 2315.3 is threefold: (1) to penalize and punish defendants for engaging in wanton or reckless disregard for public safety in the storage, handling, or transportation of hazardous or toxic substances that causes injury to others; (2) to deter the tortfeasor and others who might follow their example from exposing the public to dangers of that kind in the future; and (3) to provide victims injured by such conduct with the incentive to act as the prosecutors of penal laws against such wrongdoers. Article 2315.3 is not designed to repair the injuries of tort victims.

645 So.2d at 612-13.

The Supreme Court's *Billiot* decision also identifies four elements of a cause of action under Article 2315.3:

In establishing the separate and distinct right to seek the exemplary or punitive award, however, the introductory clause of Article 2315.3 does not relieve the plaintiff of the burden of proving the basic factual elements of a tort case. To the contrary, Article 2315.3 itself, by its narrow authorization of punitive damages awards under special circumstances, imposes a more onerous proof requirement than plaintiffs face in ordinary negligence cases. In order to obtain an award of exemplary or punitive damages, the plaintiff first must prove that the defendant's conduct was wanton or reckless. In practice, this standard obliges the plaintiff to prove at least that the defendant proceeded in disregard of a high and excessive degree of danger, either known to him or apparent to a reasonable person in his position. *Prosser & Keeton*, supra, § 34, at 213-14. In other words, the "wanton" or "reckless" conduct that must be proved is highly unreasonable conduct, involving an extreme departure from ordinary care, in a situation where a high degree of danger is apparent. Id. at 214; see also *Griffin v. Tenneco Oil Co.*, 531 So.2d 498, 501 (La.App. 4 Cir.1988) (quoting *Cates v. Beauregard Electric Cooperative, Inc.*, 316 So.2d 907, 918 (La.App. 3 Cir.1975)). Second, the plaintiff must show that the danger created by the defendant's wanton or reckless conduct threatened or endangered the public safety. Third, the statute requires proof that the defendant's wanton or reckless conduct

> occurred in the storage, handling or transportation of hazardous or toxic substances. Finally, the plaintiff is required to prove that his or her injury was caused by the defendant's wanton or reckless conduct consisting of all of these elements.

645 So.2d at 613. See also *Gaspard v. Orleans Parish School Board*, 96-1754 (La.App. 4 Cir. 2/5/97), 688 So.2d 1298.[1]

It is clear from *Billiot* that liability under Article 2315.3 does not require any intentional wrong. Instead, the degree of culpability required under Article 2315.3 and *Billiot* "fall[s] somewhere between simple negligence and intentional wrong doing". *Griffin v. Tenneco Oil Co., 625 So.2d 1090, 1091 (La.App. 4th Cir.1993), writ denied, 631 So.2d 449 (La.1994).* The requisite conduct is, in effect, "gross negligence". Id. See *Sharp v. Daigre, 555* So.2d 1361, 1364 n. 10 (La.1990) ("Wanton negligence is still negligence[.]").

We review the jury's determination of liability for punitive damages under the clearly wrong-manifestly erroneous standard of review. See *Dekeyser v. Automotive Cas. Ins. Co.*, 97-1251 (La.App. 4th Cir 2/4/98), 706 So.2d 676, 684 (discussing punitive damages under Article 2315.4). Thus, we may not set aside the jury's finding if it is one as to which reasonable minds could differ. See, e.g., *Stobart v. State Through DOTD*, 617 So.2d 880 (La.1993). The question is not whether we, as an initial matter, would make the same finding as did the jury on the issue of liability for

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[1] The *Billiot* opinion's reference to "a more onerous proof requirement" refers to the four elements that need to be shown rather than to the evidentiary burden of proof. *Rivera v. United Gas Pipeline Co., 96-502, 96-503, 97-161 (La.App. 5th Cir 6/30/97), 697 So.2d 327, 334-35.* The usual "preponderance of the evidence" standard applies to claims under Article 2315.3. *Id.*

punitive damages but, instead, whether, in light of the record as a whole, the jury's finding was unreasonable. Id. This is a function of the allocation of responsibility between the finder of fact and the appellate court.

It is undisputed that, from the time GATX 55996 and the other five pressurized butadiene tank cars were left at CSX's interchange by AGS, about six and one-half hours passed before the leaking butadiene ignited. It is also undisputed that, during that six and one-half hours, no inspection was made of GATX 55996 or the other five pressurized butadiene tank cars. There was expert testimony that a simple inspection of GATX 55996 would have detected the leak. Butadiene has a low odor threshold and can be smelled at concentrations in the air of two parts per million. For butadiene to ignite, as happened in this case, it must appear in the air at concentrations of 20,000 parts per million. In fact, the ignition source was some ways away from GATX 55996 and, nearer the source of the leak (i.e. the tank car), the concentrations of butadiene in the air must have been even greater. When CSX had other hazardous material tank car leaks in Gentilly, it dealt with the situation by isolating the leaking tank car, repairing the leak or offloading the hazardous cargo onto trucks. In short, the jury reasonably could have concluded that a simple inspection of GATX 55996 would have prevented the butadiene fire.

The issue boils down to whether the jury reasonably could find that, by not inspecting GATX 55996 and the other five pressurized butadiene tank cars for a period of six and one-half hours while they sat on CSX's interchange tracks in the Gentilly residential area, CSX acted in "wanton or reckless disregard of the public safety", Civ.Code art. 2315.3, as that element is described in *Billiot*. The actual explanation for why CSX did not inspect GATX 55996 for so long is that GATX 55996 was never brought from CSX's

interchange tracks into CSX's main yard. CSX's Gentilly yard employees testified that CSX's Gentilly interchange tracks are located outside of CSX's main Gentilly yard. After rail cars are left for CSX on CSX's interchange tracks, they are brought into the main yard by CSX. Once the rail cars are brought into the main yard, they are inspected for leaks. Rail cars are not inspected for leaks while they are on CSX's interchange tracks.

CSX's employees testified that there were two possible reasons why rail cars would be left upon CSX's interchange tracks for such an extended period. First, there could be a shortage of track space in the main yard upon which to park the rail cars. Second, there could be insufficient CSX personnel on duty to move the rail cars into the main yard in the timely manner. In the present case, there were tracks available in the main yard on the night of September 8- 9, 1987, so the lengthy delay in moving GATX 55996 and the other five pressurized butadiene tank cars into the main yard was caused by lack of sufficient CSX personnel on duty. In any event, the important issue is not per se the delay in moving GATX 55996 and the other pressurized butadiene tank cars into the main yard but, rather, the delay in inspecting the tank cars for leaks. Put another way, regardless of whether CSX brought the tank cars into the main yard and inspected them for leaks there, or whether CSX broke with its standard practice and inspected the tank cars for leaks while they were still on CSX's interchange tracks, the fire would have been prevented if GATX 55996 had been inspected in a timely manner.

The several CSX employees who worked in the Gentilly yard and testified gave no explanation for CSX's apparent policy of not inspecting hazardous materials tank cars so long as they were on CSX's interchange tracks. The rationale for CSX's apparent policy as to inspection of hazardous material

tank cars in Gentilly, i.e. inspecting them for leaks (apparently promptly) once they are brought into CSX's main yard but not inspecting them at all so long as they remained on CSX's interchange tracks, regardless of how long they remain on CSX's interchange tracks, is not apparent to us. The tank cars would in no way be any less hazardous while they were on CSX's interchange tracks (as might be the case if, for example, the interchange tracks were located in a remote, unpopulated area). The issue of safety is affected by how promptly the tank cars are inspected for leaks, not whether they are located on the interchange tracks versus tracks in the main yard.

The record reveals at least five circumstances that could have led the jury to find that failure to inspect for leaks in a timely manner pressurized butadiene tank cars on CSX's interchange tracks constituted "wanton or reckless disregard for public safety" as provided in Article 2315.3 and discussed in *Billiot*. First, butadiene is an extremely hazardous substance and, in fact, is considered one of the 100 most hazardous substances. It is carcinogenic, flammable and volatile/explosive. The products of burning butadiene include several carcinogenic hazardous chemicals. Thus, any release of butadiene creates a very substantial risk. An inspection of a tank car or other rail car carrying non-hazardous cargo might be deferred properly as a matter of convenience. However, a rail car carrying a hazardous cargo, particularly a pressurized tank car carrying a liquid or gaseous ultrahazardous chemical cargo, should be inspected promptly for leaks.

Second, the six pressurized butadiene tank cars parked on CSX's interchange tracks, including GATX 55996, contained a very large quantity of butadiene. GATX 55996 carried 30,000 gallons of butadiene and, presumably, each of the other five tank cars carried a similar amount. The leak

and two-day fire involving GATX 55996 alone contaminated many city blocks of homes with butadiene as well as soot containing the carcinogenic products of burning butadiene. Obviously, if the fire had spread from GATX 55996 to the other five tank cars, the amount of butadiene and butadiene burn products released would have been increased fivefold. The explosion of GATX 55996 alone could have destroyed city blocks of homes. The explosion of all six tank cars would, of course, have been even more devastating. There also was the possibility that GATX 55996 would take off like a missile, flying as much as a mile in any direction and wrecking havoc far and wide. It is difficult to imagine the death and destruction that could result from a single such missile, much less six. Thus, the risk presented by a butadiene leak was, in the present case, massive because of the large amount of butadiene involved. The large quantity of butadiene involved made the need for prompt inspection for leaks more urgent.

Third, CSX's interchange tracks, where the butadiene tank cars were left until GATX 55996 caught fire, are located in a densely-populated residential area. A butadiene leak on a remote stretch of railroad track in an uninhabited rural area is not nearly so serious as such a leak in an urban area and, in particular, in a residential area. Thus, while an inspection of a hazardous tank car in some locations properly might be deferred as a matter of convenience, a hazardous cargo tank car arriving in a densely-populated residential area, such as Gentilly, presents the strongest possible need for prompt inspection for leaks. In fact, the New Orleans Fire Chief, well prior to the leak and fire at issue, had requested of CSX that, when tank cars were parked near the residential area of the French Quarter for more than two hours, CSX have someone keep watch over them. CSX argues that this request was related specifically to the

French Quarter and did not relate to Gentilly. That is correct but the point that CSX should have drawn from the Fire Chief's request is that the Fire Department did not want tank cars left unattended near residential areas for more than two hours. The hazard presented to the residents of Gentilly was the same as the hazard presented to the residents of the French Quarter.

Fourth, as testified to by defense expert witness William Cruice, the railroad industry is well aware that all tank cars leak. Thus, the butadiene leak in this case was not at all an unforeseeable type of accident. Obviously, it is because of CSX's knowledge that rail tank cars leak that CSX inspects them for leaks once they are brought into CSX's main yard at Gentilly. Yet, there is no reason that rail tank cars are any less likely to leak while on CSX's Gentilly interchange tracks than while in CSX's Gentilly main yard. Thus, CSX's knowledge that rail tank cars leak, combined with the obvious fact that rail tank cars can leak on the interchange tracks just as easily as they can leak in the main yard, could well have suggested to the jury that there was a need for CSX to inspect promptly for leaks pressurized butadiene tank cars delivered to CSX's interchange tracks.

Fifth, at least ten tank car leaks were detected in Gentilly's main yard in the three and one-half year period prior to the GATX 55996 butadiene leak and fire and, in fact, six of them occurred in the seven months preceding the GATX 55996 leak and fire. This certainly put CSX on notice of the need to inspect hazardous materials tank cars in Gentilly. CSX argues that these ten prior leaks are of no import to this case because these leaks were detected in the Gentilly main yard rather than on the Gentilly interchange tracks. The fact that the ten leaks were detected in the CSX main yard, rather than on the CSX interchange tracks, is explained simply by the fact that CSX does not inspect tank

cars for leaks while they are on the interchange tracks and, instead, inspects them only once they are brought into the main yard. The general point is that CSX was aware that, from time to time, leaking tank cars were arriving in Gentilly and the jury could reasonably find that this was another reason for CSX to inspect promptly for leaks in arriving tank cars carrying hazardous materials even while they were on the interchange tracks.

CSX argues that there is no evidence that its employees actually knew that GATX 55996 was leaking prior to the ignition of the butadiene. However, the issue is whether CSX should have known of the GATX 55996 leak in time to prevent the fire. If CSX should have known that GATX 55996 was leaking, then, in legal terms, CSX is said to have "constructive knowledge" of the leak even if it had no actual knowledge of the leak.

The Louisiana Supreme Court discussed the concept of constructive knowledge in tort law at some length in its decision in *Levi v. Southwest Louisiana Electric Membership Cooperative*, 542 So.2d 1081 (La.1989). The question in Levi was whether the defendant power company should be held liable for an electrical hazard of which it did not have actual knowledge. The *Levi* court analyzed the issue thus:

> A power company is required to recognize that its conduct involves a risk of causing harm to another if a reasonable person would do so while exercising such attention, perception of the circumstances, memory, knowledge of other pertinent matters, intelligence and judgment as a reasonable person would have ... If the company has in fact more than a minimum of these qualities, it is required to exercise the superior qualities

> that it has in a manner reasonable under the circumstances ... The standard becomes, in other words, that of a reasonable person with such superior attributes ...
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> It is well recognized that those who engage in certain activities or come into certain relationships with people or things are under a peculiar obligation to acquire knowledge and experience about that activity, person or thing. A carrier owes to its passengers the duty of discovering all detectable defects. Manufacturers must learn of dangers that lurk their products ... Traditionally, professionals as well as manufacturers must keep reasonably abreast of current advances in their fields ...
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> By the same token, a company which maintains and employs high power lines is required to exercise the utmost care to reduce hazards to life as far as practicable ... Pursuant to this duty, a power company has an obligation to make reasonable inspections of wires and other instrumentalities in order to discover and remedy hazards and defects ... Consequently, a company will be considered to have constructive knowledge of an electrical hazard which has existed for a period of time which would reasonably permit discovery had the company adequately performed its duties ...

542 So.2d at 1085-86 (citations omitted).

In *Levi*, the power company was held to have a duty to make reasonable inspections to discover hazards and was held to have constructive knowledge of hazards which had

existed for a sufficient length of time to permit discovery had reasonable inspections been made. We believe that a similar analysis applies to the present case because the transportation of hazardous materials involves risks at least as great as those involved with the provision of electricity.

As a professional transporter of hazardous substances by rail, CSX has an obligation to be knowledgeable about the possible hazards involved and the means and methods of preventing or remediating them. This would include knowledge of both the possibility of leaks in pressurized tank cars and the hazardous nature of butadiene. CSX also has "an obligation to make reasonable inspections" "in order to discover and remedy hazards and defects", *Levi*, supra, in pressurized tank cars carrying hazardous materials in urban areas. CSX also is properly considered to have constructive knowledge of a leak of hazardous cargo "which has existed for a period of time which would reasonably permit discovery had the company adequately performed its duties [of inspection]". Id.

There is substantial evidence in the record from which the jury reasonably could have concluded that GATX 55996 was already leaking when it was delivered to CSX's interchange tracks six-and-a-half hours before the leaking butadiene ignited. The plaintiff's expert mechanical engineer, Andrew McPhate, opined that GATX 55996 began leaking as soon as it was loaded with butadiene in Good Hope and that the leak became worse and worse up to the start of the fire. CSX's expert witness Steve Verret found physical evidence, in the form of higher butadiene readings along the tracks in the direction from which GATX 55996 had come to CSX's interchange tracks, which suggests that the tank car already was leaking when it was delivered to the interchange tracks. Thus, the jury reasonably could conclude that CSX had a period of six-and-a-half hours, prior to the fire, to

inspect GATX 55996 and discover and remediate the leak. The jury also reasonably could conclude that an inspection of the six pressurized butadiene tank cars should have taken place less than six-and-a-half hours after their delivery to CSX's interchange tracks. In making such a finding, it is appropriate to consider that, even if the chance of any particular tank car leaking and igniting is small, the possible harm that can occur from even a single leak is enormous, and the additional cost of a more timely inspection is little or nothing. *Levi*, 542 So.2d at 1086-87.

We recognize that the *Levi* case did not involve Article 2315.3 and that *Levi* dealt with ordinary negligence and not the "reckless or wanton" conduct addressed in Article 2315.3 and discussed in *Billiot*. Thus, we hold that, while it is permissible to apply the Levi rule of constructive knowledge in an Article 2315.3 case, it must be done in the context of proving reckless or wanton misconduct and not mere ordinary negligence. While the doctrine of constructive knowledge can be used to prove fault in both ordinary negligence cases and in Article 2315.3 cases, the Article 2315.3 plaintiff must use it to prove "*highly* unreasonable conduct, involving extreme departure from ordinary care", *Billiot*, 645 So.2d at 613 (emphasis added), as opposed to the ordinary negligence plaintiff who need prove only any unreasonable conduct and any departure from ordinary care.

CSX argues that it is per se inappropriate to apply the doctrine of constructive knowledge in an Article 2315.3 case. We disagree because the doctrine of constructive knowledge is, as we have just discussed, a means of proof rather than a standard as to what must be proven. Further, we believe CSX's argument is foreclosed by the *Billiot* decision which states that wanton or reckless conduct involves the defendant proceeding in the face of danger either known to him "or apparent to a reasonable person in his position". 645

So.2d at 613. This language in *Billiot* appears to embrace the concept of constructive knowledge and obviate any requirement of actual knowledge of danger in Article 2315.3 cases.[2]

CSX's second argument as to punitive damages is based upon the procedural circumstance that the quantum of punitive damages was determined when the quantum of compensatory damages had been determined as to only 20 of 8,047 plaintiff class members. CSX argues that there is a constitutional Due Process requirement of a "reasonable relationship" between the amount of punitive damages and the amount of compensatory damages. Thus, so CSX's argument goes, as the jury did not know the amount of compensatory damages for the class as a whole, it could not have determined the amount of punitive damages in a constitutionally proper way. Consequently, CSX argues, there must be a new trial as to the amount of the punitive damages. (Thus, CSX is not, by this argument, literally challenging liability for punitive damages, which was decided in the Phase I trial, but rather the Phase II trial which determined the amount of punitive damages.) Although CSX does not explicitly so state, the logical implication of CSX's argument is that the new trial as to the amount of punitive damages would not take place until there have been

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[2] CSX points out that there is no evidence that CSX was cited by any regulatory authority in connection with the GATX 55996 leak and fire. Neither *Billiot* nor Article 2315.3 itself makes regulatory citation a predicate to an Article 2315.3 action. In fact, it already has been held, in an Article 2315.3 case, involving the GATX 55996 leak and fire, that compliance with government regulations does not preclude tort liability. *Galjour v. General American Tank Car Corp.*, 764 F.Supp. 1093, 1101 (E.D.La.1991).

determinations of the compensatory damages to be awarded to each one of the 8,047 class members.[3]

We disagree with CSX's argument because the "reasonable relationship" Due Process factor is one to be considered upon appellate (or trial court) review of a jury's determination of the amount of punitive damages rather than a factor to be considered by the jury itself in determining the amount of punitive damages as an initial matter. Thus, the lack of a determination of compensatory damages as to all class members as of the time of trial of the amount of punitive damages is irrelevant, at least in terms of constitutional Due Process, because there is no Due Process requirement that the jury consider the amount of compensatory damages when determining the amount of punitive damages.

The status of the "reasonable relationship" factor as part of a Due Process constitutional analysis of whether an award of punitive damages is excessive was established by *BMW of North America, Inc. v. Gore, 517* U.S. 559, 116 S.Ct. 1589, 1601-1603, 134 L.Ed.2d 809 (1996), and was discussed in *TXO Production Corp. v. Alliance Resources Corp.*, 509 U.S. 443, 113 S.Ct. 2711, 2721-22, 125 L.Ed.2d 366 (1993), and was mentioned in *Pacific Mut. Life Ins. Co. v. Haslip*, 499 U.S. 1, 111 S.Ct. 1032, 1045-46, 113 L.Ed.2d 1 (1991). In all three of these cases, the "reasonable relationship" Due Process factor was addressed in the context of appellate review of the quantum of punitive damages awards. None of these three cases holds that the "reasonable relationship" factor must be considered by the jury. In *Haslip*, the jury instruction on punitive damages did not include any reference to the

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[3] There has been an additional Phase III trial in which there have been determinations of the compensatory damages to be awarded to each of an additional 20 selected plaintiffs.

"reasonable relationship" factor, see 111 S.Ct. at 1037 n. 7, but, despite the fact that the *Haslip* court "carefully reviewed" that jury instruction, 111 S.Ct. at 1044, it was found to be acceptable. Also, the *Haslip* court appears to have contemplated that the "reasonable relationship" factor would be applied on appeal when it stated: "The Alabama Supreme Court's postverdict review ensures that punitive damages awards are not grossly out of proportion to the severity of the offense and have some understandable relationship to compensatory damages."

The Louisiana Supreme Court, in a decision upon a defense writ application in this case, closely approached the question of whether the jury should consider the amount of compensatory damages in setting the amount of punitive damages:

> In addition to compensatory damages, the class seeks punitive damages under former Louisiana Civil Code article 2315.3. Under the trial plan set out in the trial court's case management orders, the trial court's plan indicates that after the jury has determined whether or not to assess punitive damages:
>
> The jury will determine punitive damages for the class as a whole as punishment for the defendant's conduct by use of a multiplier based on what the compensatory damages to a given plaintiff are.
>
> It is this instruction, that the jury should use a multiplier in assessing punitive damages, to which defendants complain.
>
> In *BMW of North America, Inc. v. Gore, 517 U.S.* 559, 116 S.Ct. 1589, 134 L.Ed.2d 809 (1996), the United States Supreme Court, in

> reviewing the punitive damages award to the plaintiff for excessiveness, examined the amount of punitive damages and compensatory damages awarded and compared the ratio between the two. Thus, a multiplier is used as a standard of review to determine if the punitive damage award is excessive and unreasonable. *BMW of North America, 517 U.S.* at 580-581, 116 S.Ct. at 1601.
>
> Therefore, considering the foregoing, in the event the jury in this matter determines that defendants are liable for punitive damages, the trial court is prohibited from instructing the jury that it may use a multiplier when determining the amount of punitive damages that can be awarded, but should instruct the jury to determine that amount of punitive damages by consideration of all relevant factors.

In re New Orleans Train Car Leakage Fire Litigation, 97-1150, 97- 1161 (La. 6/27/97), 697 So.2d 239 (emphasis added) (footnotes omitted). It appears that the Louisiana Supreme Court, using the term "multiplier" to refer to the *BMW* "reasonable relationship" factor, held that factor to be applicable to appellate (or trial court) review of jury verdicts rather than to the jury's determination of the amount of punitive damages as an initial matter. Thus, under the Louisiana Supreme Court's decision, there is certainly no Due Process requirement that the jury, in setting the amount of punitive damages, consider the amount of compensatory damages.

Lastly, to the extent that CSX is arguing that, because there has not yet been a determination of the amount of

compensatory damages as to all of the plaintiff class members, CSX is denied Due Process by a lack of appellate (or trial court) review of the "reasonable relationship" factor, we disagree with CSX's argument for a new trial on the quantum of punitive damages for two reasons. First, even if the present lack of a determination of the amount of compensatory damages prevented appellate court (or trial court) review of the jury's determination of the amount of punitive damages (a position with which we do not agree), that would not require a new trial on the quantum of punitive damages. Rather, it would be necessary merely to await the determination of the amounts of compensatory damages before subjecting the jury verdict on amount of punitive damages to appellate (or trial court) review. CSX's appeal could be stayed or dismissed without prejudice perhaps with a stay of execution of judgment. Second, and more to the point in light of our appellate review of the quantum of punitive damages set forth below, we believe that the BMW mandated Due Process review of the jury's verdict can be performed on the present record despite the procedural circumstance that the amounts of compensatory damages for most of the plaintiff class members have not yet been determined. We will address this point further below in our review of the quantum of punitive damages.

CSX's third argument on appeal as to punitive damages is that, by entering a judgment on punitive damages as to the whole plaintiff class, rather than limiting the judgment on punitive damages to the 20 selected plaintiffs whose compensatory damages were determined in the Phase I trial, the trial court violated the instructions of the Louisiana Supreme Court given in two decisions upon writ applications. In the first of those two decisions, *In re New Orleans Train Car Leakage Fire Litigation*, 97-2547 (La.10/31/97), 707 So.2d 677, the Louisiana Supreme Court

did hold that the trial court should not render a judgment upon punitive damages until "all liability issues" had been adjudicated. The Court based this upon Article 593.1 of the Code of Civil Procedure. However, in the second decision upon writ applications, the Court took a different approach. *In re New Orleans Train Car Leakage Fire Litigation*, 98-2399, 98-2622 (La.2/24/99), 728 So.2d 853. In its February 24, 1999 decision, the Court directed the trial court to enter judgment in favor of the 20 selected plaintiffs as to liability, allocation of fault and damages, both compensatory and punitive, and to designate that judgment as final for purposes of post-trial motions and appellate review. Id. However, the Court did not prohibit the trial court from entering a judgment as to punitive damages with respect to the entire class. Thus, in its February 24, 1999 decision, which appears to supercede its October 31, 1997 decision, the Court appears to have left open for the trial court to decide, at least as an initial matter, whether to enter judgment on punitive damages as to all class members.

Also, the October 31, 1997 decision, which prohibited entry of any judgment as to punitive damages, was based upon Article 593.1 of the Code of Civil Procedure and, in its February 24, 1999 decision, the Court stated:

> On reconsideration, we have some doubt that Article 593.1 (now repealed) was applicable at all, since all issues of the liability of the defendants apparently had been adjudicated by the trial court, although there are still causation issues to be decided as to the remaining plaintiffs.

728 So.2d at 854 n. 3. As the issue of CSX's liability for punitive damages was decided in the Phase I trial, and even the issue of the overall quantum of punitive damages was decided in the Phase II trial, so that the only punitive

damages issue left to be determined is the allocation of the total punitive damages award among the individual class members (an issue in which CSX has no interest), it does appear that Article 593.1 does not bar entry of a judgment as to the total amount of punitive damages owed to the entire class.

Lastly, in its February 24, 1999 decision, the Court remarked "given the size of this verdict and the length of time since its entry, as well as the length of this litigation over the 1987 incident, immediate review of this judgment would be beneficial to both sides". 728 So.2d at 854. It seems more consistent with the Court's expressed intent (now over two years ago) to speed the resolution of this long-running litigation, for the trial court to proceed with entry of an immediately-appealable judgement as to the total punitive damages owed to the entire class than to defer entry of that judgment to what could be a much later date. The trial court did not err by entering a judgment as to the total punitive damages owed to the entire class.

CSX's fourth and final argument as to punitive damages is that the $850 million judgment (which the trial court entered after rejecting the jury's $2.5 billion verdict) is so excessive as to constitute (1) an unconstitutional arbitrary deprivation of property without due process of law and (2) an abuse of discretion under Louisiana tort law.

We will address first CSX's Due Process argument. We turn to the guidance supplied by the United States Supreme Court in its *BMW, TXO* and *Haslip* decisions. While BMW provides the most recent, and perhaps most systematic, analysis of whether a punitive damages award is so large as to constitute a denial of Due Process, *BMW* does not overrule *TXO* or *Haslip* and, in fact, relies upon those two earlier decisions. Thus, we will apply all three of the Court's pronouncements upon this issue. We address the Due

Process issue on a de novo review basis. *Cooper Industries, Inc. v. Leatherman Tool Group Inc.*, 532 U.S. 424, 121 S.Ct. 1678, 149 L.Ed.2d 674 (2001).

In *BMW*, the defendant was found liable for $4,000 in compensatory damages for purely economic harm because it sold a car to the plaintiff without disclosing that the car had been repainted prior to sale. The BMW jury awarded $4,000,000 in punitive damages which was reduced to $2,000,000 by the Alabama Supreme Court. The Court looked to three "guideposts", 116 S.Ct. at 1598, as to whether the $2,000,000 punitive damages award was unconstitutional: the degree of reprehensibility of the defendant's conduct, the ratio of punitive damages to the compensatory damages (i.e. the "reasonable relationship" factor) and the difference between the punitive damages and the criminal and civil penalties that could be awarded by statute.

The *BMW* court described the degree of reprehensibility of the defendant's conduct as "perhaps the most important" of the guideposts to the constitutionality of a punitive damages award. The Court then stressed that the harm in the *BMW* case was "purely economic" and presented no danger to health or safety:

> In this case, none of the aggravating factors associated with particularly reprehensible conduct is present. The harm *BMW* inflicted on Dr. Gore was purely economic in nature. The presale refinishing of the car had no effect on its performance or safety features, or even its appearance for at least nine months after his purchase. *BMW's* conduct evinced no indifference to or reckless disregard for the health and safety of others.

116 S.Ct. at 1599 (emphasis added). Both the potential harm in the present case, widespread death, injury and destruction

for miles across a city, and the actual harm in the present case, particularly the exposure of an entire residential neighborhood to carcinogenic hazardous chemicals, make the harm in the *BMW* case the very antithesis of the present case. The jury determined that CSX acted wantonly or recklessly, a finding which we have found to not be clearly wrong/manifestly erroneous, and that wantonness or recklessness created a danger to the health and safety of others of truly extraordinary magnitude. Clearly the "degree of reprehensibility" guidepost, perhaps the most important guidepost, weighs heavily in favor of the conclusion that the punitive damages award is not unconstitutionally excessive.

CSX argues that the second *BMW* "guidepost", the ratio of punitive damages to the compensatory damages (i.e., the "reasonable relationship" factor), cannot be applied here because the amounts of compensatory damages to be awarded to each of the bulk of the plaintiff class members have not yet been determined. Therefore, CSX argues, it is necessarily deprived of one element of a constitutionally-mandated appellate (or trial court) review of the jury's verdict. We disagree with CSX for two reasons.

First, in *BMW*, the Court compared the punitive damages to only the compensatory damages because, in *BMW*, there was only factual harm and no potential harm. However, in *TXO*, there had been a large amount of potential harm. In fact, in *BMW*, the Court, after discussing the "potential harm" analysis of *TXO*, distinguished *TXO* by stating that "there is no suggestion that Dr. Gore [the *BMW* plaintiff] or any other *BMW* purchaser was threatened with any additional potential harm by BMW's nondisclosure policy". *116 S.Ct. at 1602.* Usually, juries are asked to determine the amount of actual harm (i.e. compensatory damages) but are not asked to determine the amount of potential harm that could have occurred. In *TXO*, the jury

determined the compensatory damages to be $19,000 and awarded $10,000,000 in punitive damages. Yet, in finding the *TXO* punitive damages not unconstitutional, the *TXO* Court compared the punitive damages, not to the compensatory damages, but, rather, to the potential harm that could have occurred despite the fact that there was no jury determination of the amount of such potential harm. If CSX's argument were correct, that there can be no constitutionally-adequate review of punitive damages in the absence of a determination of the amount of compensatory damages, then the bulk of the analysis in *TXO* would have been impossible and the BMW Court would not have approved of *TXO's* potential harm analysis.

Second, we do not agree with CSX's position that we have no way to compare the amount of the punitive damages to the actual harm in this case. CSX argues that the awards of compensatory damages to just 20 of the 8,047 plaintiff class members are meaningless because 20 plaintiffs are such a small percentage of the overall class and because those plaintiffs were selected half by the plaintiffs' counsel and half by the defense counsel rather than by any statistically valid sampling technique. We disagree because, while we recognize that the trial court's determinations of the compensatory damages (made after the trial court rejected the jury's awards) may not be sufficient evidence from which to draw an inference of the average compensatory damages of all members of the class, we believe that the determinations do give an indication of the likely range and approximate order of magnitude of the compensatory damages of all of the plaintiff class members. The trial courts' awards range from a high of $116,800 to a low of $5,500. We presume that this wide range reflects the fact that the plaintiffs' counsel would have selected plaintiffs who were closest to the fire and suffered the worst damages

while the defense counsel would have selected plaintiffs who were farthest from the fire and suffered the least damages. Four plaintiffs were awarded less than $10,000, eight were awarded between $11,000 and $29,900, six were awarded $33,900 to $63,000 and two were awarded $116,800 and $116,000 respectively. From this, we generalize to say that a typical award of compensatory damages in this case is in the low to middle tens of thousands of dollars albeit with a significant number of atypical awards. The $850 million punitive damages award averages $105,562.42 per class member (although we understand that, ultimately, it may be allocated among the class members differently) so there does not seem to be an outrageous ratio of punitive damages to compensatory damages and nothing at all like the 526 to 1 ratio approved in *TXO* or the 500 to 1 ratio disallowed in *BMW*.

Although the term "ratio", used by the *BMW* Court in relation to the "reasonable relationship" factor, conjures up notions of exact mathematical calculation, the *BMW* Court in fact emphasized that the analysis involves, not mathematical formulae, but, instead, general concerns of reasonableness:

> Of course, we have consistently rejected the notion that the constitutional line is marked by a simple mathematical formula, even one that compares actual and potential damages to the punitive award. *TXO*, 509 U.S., at 458, 113 S.Ct., at 2720. Indeed, low awards of compensatory damages may properly support a higher ratio than high compensatory awards, if, for example, a particularly egregious act has resulted in only a small amount of economic damages. A higher ratio may also be justified in cases in which the injury is hard to detect or the monetary value

> of noneconomic harm might have been difficult to determine. It is appropriate, therefore, to reiterate our rejection of a categorical approach. Once again, "we return to what we said ... in *Haslip*: 'We need not, and indeed we cannot, draw a mathematical bright line between the constitutionally acceptable and the constitutionally unacceptable that would fit every case. We can say, however, that [a] general concer[n] of reasonableness ... properly enter[s] into the constitutional calculus.' " Id., at 458, 113 S.Ct., at 2720 (quoting *Haslip*, 499 U.S., at 18, 111 S.Ct., at 1043). In most cases, the ratio will be within a constitutionally acceptable range, and remittitur will not be justified on this basis. When the ratio is a breathtaking 500 to 1, however, the award must surely "raise a suspicious judicial eyebrow." *TXO*, 509 U.S., at 481, 113 S.Ct., at 2732 (O'CONNOR, J., dissenting).

BMW, 116 S.Ct. at 1602-1603 (emphasis added). Consequently, in view of *BMW*"s eschewing of mathematical exactitude, in favor of what we would describe as a ratio used as a rough quantitative aid to a qualitative judgment as to reasonableness, we feel that our above use of the limited number of awards of compensatory damages (in terms of range of awards and rough order of magnitude) is appropriate.

We also believe that, implicit in CSX's argument, is the notion that an award of compensatory damages is the only possible information about the amount of harm suffered by the plaintiff class members. However, there was eyewitness and expert testimony as to the exposure of the plaintiff class

members to carcinogenic hazardous chemicals (butadiene and its burn products), expert testimony about the risks associated with that exposure due to the soot in the plaintiffs' homes, and eyewitness testimony about the sudden, forced middle-of-the-night evacuation of the residential neighborhood around the fire. Fright and shock among the plaintiffs must have accompanied and followed the fire and evacuation. We believe that the *BMW* Court's "general concern of reasonableness", discussed in the above quotation from *BMW*, is sufficiently broad to allow us to compare the amount of the punitive damages, not just to dollar amounts of compensatory damages, but also to the type and severity of the actual harm suffered by the plaintiffs which gives rise to their claims for compensatory damages.

As mentioned above, the quantum of punitive damages awarded by the trial court (after it rejected the jury's verdict) amounts to $105,562.42 per plaintiff. Is that amount of punitive damages too great relative to the actual harm suffered by a typical member of the plaintiff class? If a single member of the plaintiff class had sued CSX individually and been awarded $105,562.42 in punitive damages, would the acute and long-term exposure of the plaintiff to carcinogenic hazardous chemicals and the shock and fright of the fire and evacuation have been insufficient to justify constitutionally a punitive damages award of that quantum? We think not. The $105,562.42 figure is not shocking relative to the eyewitness and expert evidence of actual harm. The $850 million figure is driven by the fact that so very many people, as many as 8,047, were harmed by CSX's wanton or reckless conduct. The fact that one's wanton or reckless conduct has harmed thousands, as opposed to a few, is hardly the basis for striking down a

punitive damage award as unconstitutional (if anything, the opposite seems more likely).

We also assess the quantum of punitive damages relative to, not only the actual harm that occurred, but also relative to the potential harm that could have occurred as a result of the wanton or reckless conduct of CSX. This assessment of the ratio of the quantum of punitive damages to the potential harm (i.e., assessing whether there is a "reasonable relationship" between the quantum of punitive damages and the potential harm) was a key factor in the determination of the *TXO* Court that the $10,000,000 punitive damages award in that case, while 526 times the amount of the $19,000 actual damages, was not unconstitutional. 113 S.Ct. at 2721-22. The *TXO* Court discussed a hypothetical in which a man fires a gun wildly into a crowd, by sheer chance injuring no one, but damaging a $10 pair of glasses. The jury reasonably could find only $10 in compensatory damages but thousands of dollars in punitive damages. *113 S.Ct. at 2721.* (The "$10 pair of glasses" and "thousands" of dollars in punitive damages reflect the fact that the hypothetical was derived from a 1931 law review article.) The *BMW* Court approved the *TXO* opinion's comparison of the amount of punitive damages to the potential harm from the defendant's conduct. *BMW*, 116 S.Ct. at 1602.

In the present case, the potential harm that could have resulted from CSX's wanton, reckless conduct is truly extraordinary. If GATX 55996 had exploded, whole city blocks of a residential area could have been destroyed. No doubt if all six of the pressurized butadiene tank cars had exploded, the devastation would have been even greater. If such an explosion had occurred prior to the evacuation of the residential area surrounding CSX's interchange tracks, hundreds or even thousands of deaths and injuries could have ensued. GATX 55996 could have taken off like a

missile, as could have the other five pressurized butadiene tank cars, wreaking death and destruction for up to a mile in any direction from the scene of the fire. It is difficult to even imagine, in financial terms, the extent of liability for such a monumental catastrophe, but it is apparent that the compensatory damages resulting from it could easily exceed the quantum of punitive damages in this case. It most certainly cannot be said that the ratio of the punitive damages to the potential harm is unconstitutionally excessive. Indeed, the potential harm in this case could cause a reasonable trier of fact to award, and a reasonable court to approve, a sum more than $850 million.

The third Due Process "guidepost" applied by the *BMW* Court to the quantum of punitive damages is a comparison to the civil or criminal penalties that could be imposed for comparable conduct. CSX argues that the maximum fine that could be imposed for violation of Louisiana environmental law is a little more than $1,000,000 under La R.S. 30:2025. Thus, CSX argues, the maximum quantum of punitive damages that can be imposed in this case is $1,000,000. We disagree.

The *BMW* Court applies three "guideposts" to the Due Process analysis of quantum of punitive damages. It is a safe assumption that the *BMW* Court did not select and use the term "guideposts" without reason. The term "guideposts" does not connote or suggest a cumulative series of three "tests" or "elements" which must each be met. Rather, we see the three guideposts as (a) considerations to be expressly taken into account in order to give coherence and some degree of structure to the Due Process analysis of quantum of punitive damages and (b) a multifactor balancing test in which the three guideposts might give contradictory indications which must be weighed against one another to achieve a final result. In the present case, the first

guidepost, reprehensibility, fully supports the quantum of punitive damages awarded, the second guidepost, comparison to the actual harm and, especially, to the potential harm, would support a quantum of punitive damages much larger than was awarded, and the third guidepost, fines for comparable conduct, suggests a much lower award. Giving each of the three guideposts equal weight leads to the conclusion that Due Process is not denied by the quantum of punitive damages in this case. Thus, we reject the notion that the third guidepost, comparable fines, standing alone, "caps" punitive damages in this case at $1 million.

The $850 million punitive damages award in this case is not so "grossly excessive", *BMW*, 116 S.Ct. at 1595, as to amount to a denial of Due Process.

We turn now to the question of whether, under Louisiana tort law, the $850 million punitive damages award must be reduced. The question is whether the trial court abused its "much discretion" in setting the amount of the award. *Dekeyser v. Automotive Cas. Ins. Co.*, 97-1251 (La.App. 4 Cir. 2/4/98), 706 So.2d 676, 685. *Accord Chinigo v. Geismar Marine, Inc.*, 512 So.2d 487, 493 (La.App. 1st Cir.), writ denied, 514 So.2d 457 (La.1987).

"Many factors may be considered when determining the amount of a reasonable award of punitive damages, including 'the defendant, the defendant's conduct, the magnitude of the potential harm arising from it, and even the defendant's net worth, to assess the probability of deterrence'". *Dekeyser*, 706 So.2d at 687 (quoting *Laris v. Parker, 92-1443* (La.App. 4 Cir 3/29/94), 635 So.2d 442, 444). Thus, Louisiana tort law, as previously determined in this Circuit by the *Dekeyser* decision, does not use a fixed list of exclusive factors to be considered in order to determine whether a punitive

damages award is so great (or small) as to constitute an abuse of discretion.

We do believe, however, that the selection and evaluation of factors to consider in any particular case, and the evaluation of whether or not a particular quantum of punitive damages is an abuse of discretion, must be governed by the three purposes of punitive damages identified in the *Billiot* decision: punishment of the defendant, deterrence of the defendant and others, and incentive to plaintiffs. 645 So.2d at 612-613. The punitive damages should be sufficient in amount to clearly and fully meet the three *Billiot* purposes but should be no more than that amount.

Two of the three examples of factors to consider given in the *Dekeyser* decision, "the defendant's conduct" and "the magnitude of the potential harm" are paralleled in two of the three *BMW* "guideposts" and what we said above as to the "reprehensibility" and "ratio" (of potential harm to punitive damages) *BMW* guideposts is applicable to the question of whether or not the quantum of punitive damages in this case is an abuse of discretion. Thus, those two *Dekeyser* factors strongly suggest that there is no abuse of discretion in the quantum of punitive damages in this case. (The third *BMW* guidepost, comparison to civil and criminal penalties for comparable misconduct, is addressed more narrowly to the question of "prior notice" of large financial consequences to particular misconduct, and thus is peculiar to the Due Process analysis and is inapplicable to the Louisiana tort law abuse of discretion analysis.)

The *Dekeyser* decision also suggests that the net worth of the defendant is a proper factor to be considered "to assess the probability of deterrence". 706 So.2d at 687. We believe net worth is also a proper factor to consider with respect to the effectiveness of punishment. The importance of the defendant's financial situation to the goals of

punishment and deterrence is obvious: What "may be awesome punishment for an impecunious individual defendant [may be] wholly insufficient to influence the behavior of a prosperous corporation". *Continental Trend Resources, Inc. v. OXY USA, Inc.*, 101 F.3d 634, 641 (10th Cir.1996) (post-BMW analysis of quantum of punitive damages), cert. denied, 520 U.S. 1241, 117 S.Ct. 1846, 137 L.Ed.2d 1049 (1997). Thus, in order to assess the extent of the punishment and deterrence that will be inflicted by a particular amount of punitive damages, it is necessary to consider the financial situation of the defendant. We note that consideration of the financial situation of the defendant is noted approvingly in *TXO*, 113 S.Ct. at 2722 n. 28, and *Haslip*, 111 S.Ct. at 1045, and does not appear to be excluded by the BMW decision. *Continental Trend, supra.* The question is, in effect, how much will this defendant be punished or deterred by an $850 million punitive damages award? The record reflects that CSX has a net worth of about $4.8 billion. The $850 million punitive damages award is about 18% of CSX's net worth. We do not find that percentage to be an abuse of discretion in this case because we cannot say that 18% is indisputably more than necessary to effectuate the *Billiot* purposes of punishment and deterrence.[4]

Quantum of Compensatory Damages

The three defendants-appellants all argue that the awards of compensatory damages made by the trial court

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[4] The plaintiffs, in their Answer To Appeal, argue that the trial court erred by rejecting the jury's $2.5 billion punitive damages verdict against CSX. We share the trial court's conviction that the $2.5 billion verdict was manifestly excessive. The sum of $2.5 billion is more than necessary to fully effect the three purposes of punitive damages as set out in *Billiot*. We are convinced that punishment beyond what is purposeful is not authorized by Article 2315.3.

(after it rejected all of the jury's verdicts) to the 20 selected plaintiffs are excessive and should be reduced. The defendants-appellants' first argument is that the testimony of two expert witnesses for the plaintiffs, which testimony was introduced to support the reasonableness and extent of the plaintiffs' fear of increased risk of cancer, should have been excluded. In particular, the defendants-appellants argue that, under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993), as adopted by *State v. Foret*, 628 So.2d 1116 (La.1993), the trial court, as the "gatekeeper" with respect to expert testimony, should have excluded the testimony of plaintiffs' experts Dr. Lawrence Miller and Dr. Drew Gouvier.

Dr. Miller is a physician and medical researcher. He testified that the plaintiff class members, including the 20 selected plaintiffs, were at a "small" but "definite" increased risk of cancer as a result of their exposure to butadiene and its breakdown products and burn products following the GATX 55996 fire.

Dr. Miller is a graduate of Harvard Medical School and has been a physician for more than twenty years. He did his internship and residency in Internal Medicine at Massachusetts General Hospital. He also did fellowships in Pulmonary Disease and Critical Medicine at Massachusetts General Hospital. He did a two-year fellowship in Clinical Pharmacology at Tufts University School of Medicine. He received a Master's in Public Health, in toxicology, from the Boston University School of Public Health. He is associated with the Department of Pharmacology and Experimental Therapeutics at Tufts University where he does research on the effects of drugs and other chemicals on the human brain. He teaches part-time at Harvard Medical School and at Tufts University School of Medicine. He has hospital privileges at Massachusetts General Hospital and sees patients on a

weekly basis. He is Board Certified in Internal Medicine, Pulmonary Disease, Critical Medicine and Clinical Pharmacology. He has treated patients for cancer resulting from exposure to butadiene and styrene (styrene is a burn product of butadiene). At the time of the GATX 55996 fire, he was teaching at LSU Medical Center in New Orleans. He was accepted as an expert witness, and testified in court, fourteen times in the twelve years prior to trial in this case.

Dr. Miller testified at length as to the carcinogenic nature of butadiene and its breakdown products and burn products. In the daytime, butadiene breaks down into several other chemicals due to exposure to the sun's ultraviolet rays and, at night, butadiene breaks down into several other chemicals due to interaction with nitrates from automobile exhaust. Butadiene and at least one of its breakdown products are clearly established in the scientific literature as carcinogenic. The Federal Agency for Toxic Substance and Disease Registry, the International Agency for Research In Cancer, and OSHA all classify butadiene as very likely a carcinogen in humans.

The burn products of butadiene (i.e. the chemicals produced by burning butadiene) are even more dangerous. Another expert witness, Dr. Catallo, did a burn test and researched the literature to determine the burn products of butadiene. Dr. Miller testified that several of the chemicals that are burn products of butadiene are known to be "very powerful carcinogens" and that they include one of the most powerful carcinogens ever studied. Dr. Catallo's burn test showed that these carcinogenic chemicals are contained in the soot produced by burning butadiene.

Dr. Miller opined that the members of the plaintiff class had a small but definite increase in their risk of cancer due to their exposure to butadiene and its breakdown products and burn products from GATX 55996. He based his opinion on a

four-part toxicological methodology which includes consideration of: (1) the particular chemicals to which someone is exposed; (2) an estimate of the amount of the chemical to which someone is exposed; (3) the length of time to which someone is exposed to the chemical; and (4) the genetic background of the person exposed to the chemical (although he testified that not much is yet known about this fourth factor).

The defendants-appellants argue that Dr. Miller's methodology in this case was so flawed as to have made his testimony completely inadmissible. However, the only part of Dr. Miller's methodology which they specifically attack is the second (amount of the chemical) factor. They argue that Dr. Miller did not know the "dose" of chemical to which the plaintiffs were exposed.

Dr. Miller did address the question of "dose" in his testimony. He explained that, in toxicology, the "dose" is a matter of both the quantity of the chemical and the length of time to which someone is exposed to the chemical. Dr. Miller testified that exposure to the chemicals involved in this case in a concentration of thousands of parts per million for a period of weeks to months would result in an increased risk of cancer. (He did not testify that lesser exposure necessarily would not result in a greater risk of cancer. There is no known safe exposure level.) Dr. Miller also testified that the members of the plaintiff class, including the 20 selected plaintiffs, were exposed to thousands of parts per million for a period of weeks to months.

Dr. Miller explained that, because chemical concentration measurements are often not taken at the time people are exposed to hazardous chemicals, it is often necessary to estimate the concentrations after the fact. There were several facts upon which Dr. Miller relied as to the concentration of chemicals and period of exposure. A large

quantity, some 30,000 gallons, of butadiene was released or burned into the air. The ignition source of the fire was four-and-a-half blocks away, and the flash point of butadiene is 20,000 parts per million, so the concentration of the butadiene in the atmosphere was at least 20,000 parts per million at a distance of four and-a-half blocks from GATX 55996. Also, the concentration of butadiene in the atmosphere would have been even higher closer to the tank car.

What seems to be of most concern to Dr. Miller was the soot produced by the burning butadiene. Dr. Miller emphasized that this soot contained several extraordinarily powerful carcinogens. This soot, which was carried by the plumes of smoke that shifted in all directions from the burning tank car, was observed in the homes of the plaintiffs and took up to a month to clean up. Dr. Miller testified that, despite ordinary clean-up efforts, the plaintiffs would remain exposed to the carcinogenic soot. The soot remains in air conditioning filters where it is recirculated back into the homes, collects in vacuum cleaners and is blown back into the homes each time the vacuum cleaner is used, and collects in attics and other inaccessible places. Dr. Miller testified that there are "known protocols" to remove carcinogens in these types of situations but that the plaintiffs had not been instructed as to them. The result is that the carcinogenic soot remains in homes indefinitely. Dr. Miller conceded that he could not measure precisely the exposure of the plaintiffs but, he testified, he concluded that the exposure was sufficient to create an increased risk of cancer. Lastly, the defendants' brief cites no expert testimony in rebuttal to Dr. Miller's methodology. The points raised by the defendants with respect to Dr. Miller's methodology were proper ones for cross-examination and for consideration by the jury and

by the trial court as trier of fact, but they do not render Dr. Miller's opinion so unreliable as to be inadmissible.

Dr. Gouvier is a clinical psychologist, a Ph.D., who is a tenured Associate Professor at LSU in Baton Rouge. He also has a private practice in Clinical Psychology, is a licensed clinical psychologist, and sees patients regularly. He is on the boards of editors of several scholarly journals, has extensive publications in peer-reviewed journals and has qualified as an expert witness in federal and state courts on several dozen occasions.

He conducted a study, in the summer and fall of 1988, as to the psychological effects of the GATX 55996 fire on the residents of the neighborhood in the vicinity of the fire. He selected one hundred families, made up of two hundred eighteen individuals, to interview and test. The families were selected using statistical sampling techniques. Among other things, Dr. Gouvier drew three "rings" at a distance of a half-mile, one mile and one-and-a-half miles from the site of the GATX 55996 fire and sampled all three of the areas. He also divided the area into northeast, northwest, southwest and southeast quadrants and sampled all four of those areas. Interviews with and tests of the one hundred selected families were pursued diligently in order to avoid self-selection bias. The result of these procedures, Dr. Gouvier testified, is a sample of the plaintiffs which is representative of the class as a whole.

The one hundred families of two hundred eighteen individuals were interviewed and subjected to a series of standardized psychological tests. These tests included the Zung Depression Inventory, the Anxiety Sensitivity Index and an Anxiety Inventory. He also interviewed and tested a comparison group of new residents who had moved into the neighborhood since the tank car fire and then used statistical analysis to compare the two groups.

The testing of the two hundred eighteen individuals of the plaintiff class revealed that they suffered from increased depression, anxiety and anxiety sensitivity after the GATX 55996 fire. (Dr. Gouvier referred some persons to mental health care providers.) The depression decreased a year after the fire but anxiety remained high. Of the two hundred eighteen individuals, 98.9% had been exposed to smoke or fumes from the fire and 76% had been evacuated. Those further away from the fire were much less likely to have evacuated but they also tended to suffer anxiety about risks they might have incurred due to their lack of evacuation. Dr. Gouvier opined that, based upon studies of other disasters, the increased anxiety among members of the plaintiff class was unlikely to go away by itself for a very long time. Lastly, Dr. Gouvier testified that the findings of his study of the plaintiff class were consistent with studies done in connection with other disasters.

The defendants-appellants make four very brief arguments that Dr. Gouvier's testimony should have been excluded: First, they complain that the twenty selected plaintiffs were not examined by Dr. Gouvier and were not among the two hundred eighteen individuals interviewed and tested. However, Dr. Gouvier was in court for most of the trial and heard all or most of the twenty selected plaintiffs testify. He read proof of claim forms by and heard taped interviews with all of the twenty selected plaintiffs. Second, the defendants-appellants complain that the two-hundred eighteen individuals who were studied by Dr. Gouvier had been told that he was working with the plaintiffs' lawyers in connection with their case. However, this source of possible bias of the two hundred individuals studied was made known to the jury and to the trial court as trier of fact, the two hundred eighteen individuals studied were warned of the anticipated discovery and cross-

examination and the need to be completely truthful, and Dr. Gouvier's interviews and testing included measures to detect fabrications or exaggerations. Third, the defendants-appellants complain that Dr. Gouvier was unable to study a control group of residents of the affected area who were not plaintiffs. However, Dr. Gouvier was able to study a comparison group of persons who moved to the affected area after the GATX 55996 fire. Fourth, the defendants-appellants complain that Dr. Gouvier's study has not been subjected to "formal" peer review. Dr. Gouvier's study in connection with the GATX 55996 fire has not been subjected to "formal" peer review because it has not been submitted for publication. However, it has been subjected to peer review by other professors at LSU who are not connected to the study. Moreover, a similar railroad tank car disaster study performed by the same group at LSU had been published and, presumably, subject to formal peer review. None of these complaints about Dr. Gouvier's testimony, either individually or collectively, amounts to a reason to exclude Dr. Gouvier's testimony (although all were fair game for the vigorous cross-examination to which Dr. Gouvier was subjected before the trial court and jury).

Lastly, we believe that if there was any error in admission of Dr. Gouvier's testimony, it was harmless. The twenty selected plaintiffs testified as to their experiences and their distress. Based upon that testimony, the trial court would almost certainly have concluded that the twenty selected plaintiffs, having been traumatized by the GATX 55996 fire, would tend to suffer short-term depression and long-term anxiety (particularly about the CSX tracks and the tank cars which remain in their neighborhood). The trial court, as finder of fact, is unlikely to have given undue weight to Dr. Gouvier's testimony when setting the amount of compensatory damages.

The defendants-appellants also argue that the trial court, as finder of fact, awarded excessive damages to each of the twenty selected plaintiffs. Almost all of the damages awarded to the twenty selected plaintiffs were general damages for physical pain and suffering, mental anguish and evacuation and inconvenience. Appellate review of general damage awards is quite limited. The trial court, as finder of fact, has "vast discretion" in setting the amount of general damages. E.g., *Youn v. Maritime Overseas Corp.*, 623 So.2d 1257 (La.1993), cert. denied, 510 U.S. 1114, 114 S.Ct. 1059, 127 L.Ed.2d 379 (1994). So long as the amount of general damages awarded is not clearly higher (or lower) than reasonable minds could accept, it may not be disturbed upon appeal. We may not look to other cases as to the amount of general damages in the absence of an abuse of discretion by the trier of fact. Id.

The testimony of the twenty selected plaintiffs regarding their experiences varies a fair amount which, no doubt, accounts for the broad range in the amounts of the awards of damages made by the trial court. The amounts of the differences between the jury verdicts (which were rejected by the trial court) and the trial court's awards vary also and, presumably, this reflects the trial court's own observations of the demeanor and credibility of the twenty selected plaintiffs. These factors make it somewhat difficult to generalize about the evidence and the amounts awarded by the trial court. They also highlight the highly subjective nature of general damages and the need to avoid second-guessing the trier of fact in the absence of a clear abuse of discretion.

Nevertheless, a few general themes emerge from the plaintiffs' testimony and bear noting. The sound of an explosion, the sight of flames, the smell of smoke and fumes and the middle-of-the night evacuation combined to produce

fear and confusion which aggravated the fear. The plaintiffs were exposed to chemical fumes which irritated their eyes and respiratory systems and, most of all, made them fearful for their health. Although their fears are not always particularized towards cancer, they have the general sense (correctly) that the chemical exposure they underwent is a threat to their health. The fact that tank cars continue to arrive in the neighborhood is a reminder of the GATX 55996 fire and a source of continued anxiety. The security which one normally feels in one's home has been eroded and that is exhibited by behaviors such as keeping a packed suitcase by the door or sleeping with one's clothes on.

We believe that there was no abuse of discretion by the trial court in its awards of compensatory damages to the twenty selected plaintiffs. The defendants-appellants' concerns that the jury acted out of bias and prejudice in setting the amounts of compensatory damages are obviated because the trial court rejected the jury's verdicts and set the amounts of the compensatory damages itself. While this court, or some other court, may have selected different general damages awards as an original matter, that is not the issue. The trial court's awards of compensatory damages, being within a reasonable range, must be affirmed.[5]

Polysar's Appeal As To Liability

Polysar was assessed 5% of the liability for compensatory damages but found not liable for punitive damages. (The overall assessment of liability for compensatory damages was: Phillips, 20%; GATC, 20%; CSX, 15%; Mitsui, 15%;

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[5] In their Answer To Appeal, the plaintiffs argue that the trial court erred by rejecting the jury verdicts as to compensatory damages and request that the jury verdicts be reinstated. A review of the facts as to the compensatory damages as to each of the twenty selected plaintiffs convinces us that the trial court did not err and that the awards of compensatory damages made by the trial court were fair and reasonable.

AGS, 5%; Illinois Central, 5%; AMF-BRD, 5%; and Polysar, 5%.) Polysar appeals and argues that it should not have been assessed *any* liability.

We will pretermit a number of Polysar's arguments as to jury instructions, standard of review, whether certain regulatory duty issues are ones of law or fact, and admissibility of certain testimony as to regulatory duty issues by conducting a *de novo* review of Polysar's liability. In doing so, we do not hold that the trial court erred in any respect. We are simply giving Polysar every benefit of the doubt so as to simplify the analysis by obviating certain issues raised by Polysar. Also in the interest of simplification, we will base our analysis upon only the plaintiffs' negligence theory and not upon strict liability. In accordance with Polysar's argument, we will analyze the applicability of the relevant federal regulations as an issue of law rather than fact.

Polysar argues that it was "simply awaiting delivery" of the butadiene at the time of the tank car fire. However, it is also true that Polysar: owned the butadiene when it was loaded onto GATX 55996 and at the time of the fire; coordinated the shipment of the butadiene from Good Hope, Louisiana, through New Orleans and on to Chattanooga; paid for that shipment; had the authority to tell Mitsui which tank cars to use; and chose the shipping route through New Orleans. Polysar was not merely a passive recipient of the butadiene but was, instead, an active participant in the transportation of the butadiene. What Polysar did *not* do was make any inspection of GATX 55996 (or the other pressurized tank cars) or take any other actions to determine whether its butadiene was being transported safely. Polysar in effect admits that it did nothing to determine whether the butadiene was being transported safely but contends that it had no duty to do so.

Whether Polysar had a duty with respect to the safety of the transportation of its butadiene is an issue of law which we address *de novo*:

> This court has adopted a duty-risk analysis to determine whether liability exists under the particular facts presented. Under this analysis the plaintiff must prove that the conduct in question was the cause-in-fact of the resulting harm, the defendant owed a duty of care to the plaintiff, the requisite duty was breached by the defendant and the risk of harm was within the scope of protection afforded by the duty breached. *Syrie v. Schilhab*, 96-1027, p. 4-5 (La.5/20/97), 693 So.2d 1173, 1176-77; *Berry v. State*, 93- 2748, p. 4 (La.5/23/94), 637 So.2d 412, 414. Under the duty-risk analysis, all four inquiries must be affirmatively answered for plaintiff to recover. *LeJeune v. Union Pacific R.R.*, 97-1843, p. 6 (La.4/14/98), 712 So.2d 491, 494.
>
> A threshold issue in any negligence action is whether the defendant owed the plaintiff a duty. *Meany v. Meany*, 94-0251, p. 6 (La.7/5/94), 639 So.2d 229, 233. Whether a duty is owed is a question of law. *Peterson v. Gibraltar Sav. & Loan*, 98-1601, 98-1609, p. 7 (La.5/18/99), 733 So.2d 1198, 1204; *Mundy v. Dep't of Health & Human Resources*, 620 So.2d 811, 813 (La.1993); *Faucheaux v. Terrebonne Consol. Gov't*, 615 So.2d 289, 292 (La.1993). In deciding whether to impose a duty in a particular case, the court must make a policy decision in light of the unique facts and circumstances presented. See *Socorro v.*

> *City of New Orleans*, 579 So.2d 931, 938 (La.1991). The court may consider various moral, social, and economic factors, including the fairness of imposing liability; the economic impact on the defendant and on similarly situated parties; the need for an incentive to prevent future harm; the nature of defendant's activity; the potential for an unmanageable flow of litigation; the historical development of precedent; and the direction in which society and its institutions are evolving. See *Meany*, 639 So.2d at 233; *Pitre v. Opelousas Gen. Hosp.*, 530 So.2d 1151, 1161 (La.1988); *Entrevia v. Hood*, 427 So.2d 1146, 1149 (La.1983).

Posecai v. Wal-Mart Stores, Inc., 99-1222 (La.11/30/99), 752 So.2d 762, 765-66.

The key dispute with respect to Polysar's duty revolves around several federal regulations, which provide as follows:

> *49 C.F.R. § 171.2*(a): *General requirements*: No person may offer or accept a hazardous material for transportation in commerce unless that person is registered in conformance with subpart G of part 107 of this chapter, if applicable, and the hazardous material is properly classed, described, packaged, marked, labeled, and in condition for shipment as required or authorized by applicable requirements of this subchapter (including § § 171.11, 171.12, and 176.11 ...).
>
> *49 C.F.R. § 172.204(a)*: *Shipper's certification*: ...Each person who offers a hazardous material for transportation shall certify that the material is offered for

transportation in accordance with this subchapter by printing...on the shipping paper containing the required shipping description the certification contained in paragraph (a)(1) of this section...[(a) (1)] "This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation."

49 C.F.R. § 173.1(b): *Purpose and scope*: A shipment of hazardous materials that is not prepared in accordance with this subchapter may not be offered for transportation by air, highway, rail, or water. It is the duty of each person who offers hazardous materials for transportation to instruct each of his officers, agents, and employees having any responsibility for preparing hazardous materials for shipment as to applicable regulations in this subchapter.

49 C.F.R. § 173.31(b)(1): *Loading and Shipping*: When tanks are loaded and prior to shipping, the shipper must determine to the extent practicable, that the tank, safety appurtenances and fittings are in proper condition for the safe transportation of the lading. Tanks with bottom discharge outlets must have their outlet caps off, or outlet cap plugs open, during the entire time tanks are being loaded. After loading, tanks...which permit more than a dropping of the liquid with the outlet caps off...must not be offered

> for transportation until proper repairs have been made. Tanks which show any dropping or leaking of liquid contents at seams or rivets, must not be offered for transportation until proper repairs are made.
>
> *49 C.F.R. § 173.31(b)(3): Securing closures*: All closures of openings in tank cars and of their protective housings must be properly secured in place by the use of a bar, wrench or other suitable tool...Manway covers...must be made tight against leakage of vapor and liquid, by use of gaskets of suitable materials, before cars are tendered to carrier for transportation...all closures of openings in tank cars must be inspected to the extent practical for corrosion of or damage to the gasket seating surface and for serviceability of packing, gaskets, and hold-down bolts. All defective packing, gaskets, bolting or threaded elements must be replaced.

These regulations, promulgated by the federal Department of Transportation, do not create any private right of action for damages. Any claim for damages in this case arises under Louisiana tort law. However, public safety regulations such as these, issued by an agency presumed to have expertise in the relevant subject matter and statutorily-charged with protecting public safety, are very useful in determining the standard of care applicable in a negligence action (i.e. defining the "duty" that is owed by someone).

It is undisputed that GATX 55996 did not comply with the above-quoted regulations, and that the required documentation applicable to GATX 55996 was incorrect, at the time Polysar's butadiene was loaded onto GATX 55996

and at the time of the fire. Polysar's position is that the federal regulations are not applicable to Polysar. Polysar's argument is as follows: The regulations apply only to a "shipper", the regulations do not define "shipper" but, in the present case, Mitsui, and not Polysar, is the "shipper". We disagree with Polysar's initial proposition. The federal regulations quoted above do not state that, as a group, they are applicable only to a "shipper" (whatever a "shipper" is). Section 171.2(a) applies to any "person [who] may offer or accept a hazardous material for transportation in commerce". This seems as applicable to Polysar, whose butadiene was being transported, as it is to Mitsui. Section 172.204(a) applies to "[e]ach person who offers a hazardous material for transportation". This seems more applicable to Polysar, whose butadiene was being transported, than to Mitsui. Section 173.1(b) applies to "each person who offers hazardous materials for transportation". Again, this seems to apply more to Polysar, whose butadiene was being transported, than to Mitsui. Section 173.31(b)(1) refers to the "shipper" without specifying what is a "shipper". This could apply to either Polysar, the owner of the butadiene seeking to have it transported, or to Mitsui, the party supplying the tank cars to carry the butadiene. Section 173.31(b)(3) says nothing as to whom it is applicable.

Our interpretation of these federal regulations is that they are applicable to, and thus impose duties upon, both Polysar and Mitsui. Because of the importance of those duties to the public safety, we view those duties as non-delegable as a matter of Louisiana tort law. (Thus, whether Mitsui is an "independent contractor" to Polysar is of no moment.) The result is that Polysar (along with Mitsui) had a duty, as a matter of Louisiana tort law, to exercise the degree of care specified in the federal regulations. Polysar's acknowledged failure to meet the standard of care specified

in the federal regulations mandates the finding that Polysar was negligent.

AMF-BRD's Appeal As To Liability

AMF-BRD was held liable for 5% of the compensatory damages but was held not liable for punitive damages. AMF-BRD argues that it should not have been held liable at all or, in the alternative, some of its 5% share of liability should have been assigned to NACC. AMF-BRD also argues that, because certain jury charges it requested were not given, the issue of its liability should be reviewed de novo on appeal.

We will review de novo the issue of AMF-BRD's liability. We will do so not because we decide that the trial court erred, but in order to simplify the analysis and give AMF-BRD every possible benefit of the doubt.

AMF-BRD argues that NACC, not AMF-BRD, was at fault. AMF-BRD manufactured the pressure tank which NACC then placed on the GATX 55996 rail car chassis. AMF- BRD notes that it was NACC that specified a bottom manway for the tank. Thus, AMF-BRD argues, it was not at fault with respect to the design of the rail car.

However, we do not believe that specification of a bottom manway is what is most important as to the causation of the leak and fire. It was established at trial that only an asbestos gasket should ever have been used with the GATX 55996 bottom manway and, if the asbestos gasket had not been replaced by Phillips with a rubber gasket, then the leak and fire would not have occurred. Thus, the key issue with respect to the liability of AMF-BRD is the failure of AMF-BRD to stencil or otherwise place a warning on the bottom manway advising that only an asbestos gasket should be used.

AMF-BRD argues that it did, in effect, give such a warning because the specifications and drawings which it supplied to NACC provided for an asbestos gasket. However, for a piece of equipment such as a rail car, which is likely to remain in service for many years, which may well change hands over the years, and which will undergo periodic maintenance and repair and perhaps modification, the specificationsand drawings delivered to the original owner are no substitute for a warning appearing on the piece of equipment itself.

AMF-BRD also argues that the GATX 55996 rail car was intended to be used by sophisticated users and, therefore, there was no need for AMF-BRD to provide any warning. However, while intended use by sophisticated users might weigh against the need for a warning in some circumstances (at least prior to the enactment of the Louisiana Products Liability Act), we do not believe that it obviates the need for a warning when there is a grave and substantial risk to the public safety at stake. In view of the great risk presented to the public at large from a leak in a chemical tank car, the fact that GATX 55996 was intended to be used by professional rail shippers or railroads does not eliminate the need for an adequate warning. In that connection, we note that AMF-BRD, as the designer of the hatch mechanism which closed the manway, had greatly superior knowledge of the critical need for an asbestos gasket, and thus should have been well aware of the need for a warning as to the gasket.

AMF-BRD further argues that, when it placed the designation "114A" on each end of the tank, it provided a warning to use an asbestos gasket. However, what the designation "114A" actually calls for is an asbestos gasket or an approved high pressure temperature-resistant equivalent. Thus, the "114A" designation relates to pressure and temperature. In the present case, the problems with

substituting a rubber gasket for an asbestos gasket result from the fact that a rubber gasket could be displaced (apparently because rubber gaskets are less rigid than asbestos gaskets) and because rubber gaskets, unlike asbestos gaskets, can react with butadiene so as to develop leaks. In any event, in light of the critical nature of the need for an asbestos gasket, and the potential for great danger to the public, the designation "114A" on the ends of the tank was not a substitute for an express warning on the manway to use only asbestos gaskets.

Lastly, AMF-BRD argues that prudent maintenance of the rail car would have called for substitution of parts of like kind, i.e., an asbestos gasket for an asbestos gasket. However, designation "114A" contemplates the possibility of substitution with a non-asbestos gasket. Moreover, in view of the critical need for an asbestos gasket and the potential for danger to the public, it should not be simply assumed that only an asbestos gasket will be installed during periodic maintenance. There should be an express warning to use only an asbestos gasket. We do not mean to suggest that AMF-BRD's negligence is equivalent to the fault of Phillips. However, the 20% allocation of fault to Phillips was four times the 5% allocation of fault to AMF-BRD, and that seems perfectly reasonable. We believe the allocation of a small percentage of the liability for compensatory damages to AMF-BRD, 5%, is appropriate.

Interest on Punitive Damages

The trial court awarded prejudgment interest on the compensatory damages and interest from the date of judgment on the punitive damages. The plaintiffs, by their Answer To Appeal, argue that the trial court erred by not awarding prejudgment interest on the punitive damages. Based upon the limited available authority from the

Louisiana Supreme Court, we believe that the trial court did not err.

In *Jordan v. Intercontinental Bulktank Corp.*, 621 So.2d 1141 (La.App. 1st Cir.), writ denied, 623 So.2d 1335, 1336 (La.1993), cert. denied, 510 U.S. 1094, 114 S.Ct. 926-27, 127 L.Ed.2d 219 (1994), it was held:

The trial court also erred in awarding prejudgment interest on the punitive damages award. Under both Louisiana and federal law, a plaintiff is entitled to interest on punitive damages only from date of judgment. *Alexander v. Burroughs Corp.*, 359 So.2d 607, 613-614 *(La.1978); Malbrough v. Wallace*, 594 So.2d 428, 438 (La.App. 1st Cir.1991), writ denied, 596 So.2d 196 (La.1992); United States v. Reul, 959 F.2d 1572 (Fed.Cir.1992); Wickham Contracting Co. v. Local Union No. 3, 955 F.2d 831 (2d Cir.1992).

621 So.2d at 1158.

Later, in *Sharbono v. Steve Lang & Son Loggers*, 97-0110 (La.7/1/97), 696 So.2d 1382, the Louisiana Supreme Court, in holding that interest on penalties in worker's compensation cases runs only from the date of judgment, cited the Jordan decision with apparent approval:

> Finally, there is the matter of interest on penalties. Both federal and state jurisprudence is nearly uniform in holding that penalty interest is entirely of the post-judgment variety, and thus is calculated only from the date the penalties are awarded until the date they are paid. E.g., United States v. Reul, 959 F.2d 1572 (Fed.Cir.1992) ("Prejudgment interest may not be awarded on punitive damages."); *Jordan v. Intercontinental Bulktank Corp.*, 621 So.2d

> 1141 (La.Ct.App. 1st Cir.1993), cert. denied, 510 U.S. 1094, 114 S.Ct. 926, 127 L.Ed.2d 219 (1994) ("Under both Louisiana and federal law, a plaintiff is entitled to interest on punitive damages only from date of judgment."), citing Alexander, 359 So.2d at 613-14.

696 So.2d at 1389. From this, we believe it most likely that the Louisiana Supreme Court adopted the Jordan rule that prejudgment interest is not to be applied to punitive damages. See also *Owens v. Anderson*, 93-1566 (La.App. 4 Cir. 1/27/94), 631 So.2d 1313, writ denied, 94-0462, 94-0494 (La.4/7/94), 635 So.2d 1135 (rendering decree with prejudgment interest on compensatory damages and with interest from date of judgment on punitive damages). The plaintiffs cite *Demarest v. Progressive American Ins. Co.*, 552 So.2d 1329 (La.App. 5th Cir.1989), but that case predates both Sharbono and Jordan and relies upon much earlier decisions awarding prejudgment interest on penalties and attorney's fees, 552 So.2d at 1338-39.

For the foregoing reasons, we affirm the judgment of the trial court. We also remand this case to the trial court for proceedings as to the question of compensatory damages with respect to the remaining class members and for any other proceedings as are necessary to conclude this action.

AFFIRMED. CASE REMANDED FOR FURTHER PROCEEDINGS.

795 So.2d 364, 2000-0479 (La.App. 4 Cir. 6/27/01)

COURT OF APPEAL OF LOUISIANA
FOURTH CIRCUIT

In re NEW ORLEANS TRAIN CAR LEAKAGE FIRE LITIGATION.

No. 2000-CA-0479.

Aug. 1, 2001.

Appeal from Civil District Court, Orleans Parish No. 87-16374, Division "Ad Hoc-B", Honorable Wallace A. Edwards, Judge Ad Hoc.

ON APPLICATION FOR REHEARING

JOAN BERNARD ARMSTRONG, Judge.

The application for rehearing of Nova Chemicals, Inc. ("Polysar") is denied. The duty and liability of Polysar was not determined solely by the ownership of the butadiene, or by any other single factor, but by the several factors discussed in our opinion on original hearing.

794 So.2d 956, 2000-0479 (La.App. 4 Cir. 8/1/01)

SUPREME COURT OF LOUISIANA

In re NEW ORLEANS CAR LEAKAGE FIRE LITIGATION

No. 2001-C-2492

Oct. 14, 2002

Prior report: La.App., 795 So.2d 364

In re AMF/BRD Inc.;–Defendant; Applying for Writ of Certiorari and/or Review, Parish of Orleans, Civil District Court Div. B, No. 87-16374; to the Court of Appeal, Fourth Circuit, No. 2000-CA-0479.

Denied.

VICTORY, J., would grant the writ.

TRAYLOR, J., would grant the writ.

WEIMER, J., would grant the writ.

827 So.2d 411, 2001-2492 (La. 10/14/02)

STATUTORY PROVISIONS

TITLE 49 –APPENDIX. TRANSPORTATION

CHAPTER 27—HAZARDOUS MATERIALS TRANSPORTATION

NOTE (1993)

(Congressional Findings: 1990 Amendment)

(Quoting Pub. L. No. 101-615, § 2, 104 Stat. 3244, 3245 (Nov. 16, 1990))

§ 1801. Congressional Declaration of Policy.

* * *

"(3) many States and localities have enacted laws and regulations which vary from Federal laws and regulations pertaining to the transportation of hazardous materials, thereby creating the potential for unreasonable hazards in other jurisdictions and confounding shippers and carriers which attempt to comply with multiple and conflicting registration, permitting, routing, notification, and other regulatory requirements,

"(4) because of the potential risks to life, property, and the environment posed by unintentional releases of hazardous materials, consistency in laws and regulations governing the transportation of hazardous materials is necessary and desirable,

"(5) in order to achieve greater uniformity and to promote the public health, welfare, and safety at all levels, Federal standards for regulating the transportation of hazardous materials in intrastate, interstate, and foreign commerce are necessary and desirable."

"(6) in order to provide reasonable, adequate, and cost-effective protection from the risks posed by the transportation of hazardous materials, a network of

adequately trained State and local emergency response personnel is required,

"(7) the Office of Technology Assessment has estimated that approximately 1,500,000 emergency response personnel need better basic or advanced training for responding to the unintentional release of hazardous materials at fixed facilities and in transportation, and

"(8) the movement of hazardous materials in commerce is necessary and desirable to maintain economic vitality and meet consumer demands, and shall be conducted in a safe and efficient manner."

* * *

TITLE 49 –APPENDIX. TRANSPORTATION
CHAPTER 27—HAZARDOUS MATERIALS TRANSPORTATION
(1990)

§ 1811. Relationship to other laws

(a) General

Except as provided in subsection (b) of this section, any requirement, of a State or political subdivision thereof, which is inconsistent with any requirement set forth in this chapter, or in a regulation issued under this chapter, is preempted.

(b) State laws

Any requirement, of a State or political subdivision thereof, which is not consistent with any requirement set forth in this chapter, or in a regulation issued under this chapter, is not preempted if, upon the application of an appropriate State agency, the Secretary determines, in accordance with procedures to be prescribed by regulation, that such requirement (1) affords an equal or greater level of protection to the public than is afforded by the requirements of this chapter or of regulations issued under this chapter and (2) does not unreasonably burden commerce. Such requirement shall not be preempted to the extent specified in such determination by the Secretary for so long as such State or political subdivision thereof continues to administer and enforce effectively such requirement.

(c) Other federal laws

The provisions of this chapter shall not apply to pipelines which are subject to regulation under the Natural Gas Pipeline Safety Act of 1968 (section 1671 et seq. of this title) or to pipelines which are subject to regulation

under Hazardous Liquid Pipeline Safety Act of 1979 [49 U.S.C.A. § 2001 et seq.].

(Pub.L. 93-633, Title I, § 112, Jan. 3, 1975, 88 Stat. 2161.)

(As amended Pub.L. 96-129, Title II, § 216(a), Nov. 30, 1979, 93 Stat. 1015.)

TITLE 49. TRANSPORTATION
SUBTITLE III—GENERAL AND INTERMODAL PROGRAMS
CHAPTER 51—TRANSPORTATION OF HAZARDOUS MATERIAL

§ 5125. Preemption

(a) General.--Except as provided in subsections (b), (c), and (e) of this section and unless authorized by another law of the United States, a requirement of a State, political subdivision of a State, or Indian tribe is preempted if–

(1) complying with a requirement of the State, political subdivision, or tribe and a requirement of this chapter or a regulation prescribed under this chapter is not possible; or

(2) the requirement of the State, political subdivision, or tribe, as applied or enforced, is an obstacle to accomplishing and carrying out this chapter or a regulation prescribed under this chapter.

(b) Substantive differences.—(1) Except as provided in subsection (c) of this section and unless authorized by another law of the United States, a law, regulation, order, or other requirement of a State, political subdivision of a State, or Indian tribe about any of the following subjects, that is not substantively the same as a provision of this chapter or a regulation prescribed under this chapter, is preempted:

(A) the designation, description, and classification of hazardous material.

(B) the packing, repacking, handling, labeling, marking, and placarding of hazardous material.

(C) the preparation, execution, and use of shipping documents related to hazardous material and requirements related to the number, contents, and placement of those documents ....

* * *

ARTICLE I–THE CONGRESS

Section 8, Clause 3. Regulation of Commerce

The Congress shall have the power . . . To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes.